a corresponding quantization table scaled by a gain factor for achieving a target compression factor;

further quantizing the DCT coefficients for each group using the corresponding quantization table scaled by a pre-set factor;

arranging the further quantized DCT coefficients in a vector;

calculating a basic compression factor provided by the quantization table scaled by the pre-set factor as a first function of the vector; and

estimating the gain factor as a second function of the basic compression factor, the second function being determined experimentally according to the target compression factor.

13. A method according to Claim 12, wherein each element comprises a plurality of digital components of different types; and wherein each element of the digital image comprises a luminance component, a first chrominance component, and a second chrominance component.

14. A method according to Claim 12, wherein the vector comprises a zig-zag vector with quantized coefficients representing low frequencies being arranged at a beginning of the vector, and quantized coefficients representing high frequencies being arranged at an end of the vector.

15. A method according to Claim 12, wherein calculating the basic compression factor comprises:

determining a first number of bits required to encode the vector; and

summing the first number of bits with a second number of bits required to encode control values, and dividing the sum by a number of elements of the digital image.

16. A method according to Claim 12, wherein the second function is a quadratic function.

17. A method according to Claim 12, further comprising:

storing a plurality of sets of parameters representing the second function, each set of parameters being associated with a corresponding value of the target compression factor;

selecting an image quality and determining a current value of the target compression factor as a function of the selected image quality; and

reading the parameters associated with the current value of the target compression factor and estimating the gain factor.

18. A method according to Claim 12, wherein the pre-set factor is determined experimentally according to the target compression factor.

19. A method according to Claim 12, further comprising:

storing the DCT coefficients in a memory and concurrently performing the further quantizing of the DCT coefficients for each group using the corresponding quantization table scaled by the pre-set factor, arranging the further quantized DCT coefficients in the vector, calculating

the basic compression factor, and estimating the gain factor; and

reading the DCT coefficients from the memory for performing the quantizing of the DCT coefficients for each group using the corresponding quantization table scaled by the gain factor.

20. A method for compressing a digital image comprising a matrix of elements, each element comprising at least one digital component for representing a pixel, the method comprising:

splitting the digital image into a plurality of blocks, and calculating for each block a group of discrete cosine transform (DCT) coefficients for the different types of components;

quantizing the DCT coefficients for each group using a corresponding quantization table scaled by a gain factor for achieving a target compression factor;

further quantizing the DCT coefficients for each group using the corresponding quantization table scaled by a pre-set factor;

arranging the further quantized DCT coefficients in a vector;

calculating a basic compression factor provided by the quantization table scaled by the pre-set factor as a first function of the vector by

determining a first number of bits required to encode the vector, and

summing the first number of bits with a second number of bits required to encode control values, and dividing the sum by a number of elements of the

digital image; and

estimating the gain factor as a second function of the basic compression factor.

21. A method according to Claim 20, wherein the second function is determined experimentally according to the target compression factor.

22. A method according to Claim 20, wherein each element comprises a plurality of digital components of different types; and wherein each element of the digital image comprises a luminance component, a first chrominance component, and a second chrominance component.

23. A method according to Claim 20, wherein the vector comprises a zig-zag vector with quantized coefficients representing low frequencies being arranged at a beginning of the vector, and quantized coefficients representing high frequencies being arranged at an end of the vector.

24. A method according to Claim 20, wherein the second function is a quadratic function.

25. A method according to Claim 20, further comprising:

storing a plurality of sets of parameters representing the second function, each set of parameters being associated with a corresponding value of the target compression factor;

selecting an image quality and determining a current value of the target compression factor as a function of the

selected image quality; and

reading the parameters associated with the current value of the target compression factor and estimating the gain factor.

26. A method according to Claim 20, wherein the pre-set factor is determined experimentally according to the target compression factor.

27. A method according to Claim 20, further comprising:

storing the DCT coefficients in a memory and concurrently performing the further quantizing of the DCT coefficients for each group using the corresponding quantization table scaled by the pre-set factor, arranging the further quantized DCT coefficients in the vector, calculating the basic compression factor, and estimating the gain factor; and

reading the DCT coefficients from the memory for performing the quantizing of the DCT coefficients for each group using the corresponding quantization table scaled by the gain factor.

28. A device for compressing a digital image comprising a matrix of elements, each element comprising at least one digital component for representing a pixel, the device comprising:

discrete cosine transform (DCT) means for splitting the digital image into a plurality of blocks, and calculating for each block a group of DCT coefficients for the different types of components;

quantization means for

quantizing the DCT coefficients of each group using a corresponding quantization table scaled by a gain factor for achieving a target compression factor, and

further quantizing the DCT coefficients of each group using the corresponding quantization table scaled by a pre-set factor;

arranging means for arranging the further quantized DCT coefficients in a vector;

calculation means for calculating a basic compression factor provided by the quantization table scaled by the pre-set factor as a first function of the vector; and

estimation means for estimating the gain factor as a second function of the basic compression factor, the second function being determined experimentally according to the target compression factor.

29. A device according to Claim 28, wherein each element comprises a plurality of digital components of different types; and wherein each element of the digital image comprises a luminance component, a first chrominance component, and a second chrominance component.

30. A device according to Claim 28, wherein the vector comprises a zig-zag vector with quantized coefficients representing low frequencies being arranged at a beginning of the vector, and quantized coefficients representing high frequencies being arranged at an end of the vector.

31. A device according to Claim 28, wherein said

quantization means quantizes the DCT coefficients for each group using the corresponding quantization table scaled by the gain factor in a first operative condition, and quantizes the DCT coefficients for each group using the corresponding quantization table scaled by the pre-set factor in a second operative condition.

32. A device according to Claim 28, wherein said calculation means determines a first number of bits required to encode the vector, and calculates the basic compression factor summing the first number of bits with a second number of bits required to encode control values, and divides the sum by a number of elements of the digital image.

33. A device according to Claim 32, wherein said DCT means comprises a DCT unit; wherein said quantization means comprises a quantization unit; wherein said arranging means comprises a vector unit; and wherein said estimation means comprises a processor for controlling the compression of the digital image; the device further comprising:

a memory for storing the quantization tables;

a counter for calculating the first number of bits; and

communication means for connecting said DCT unit, said quantization unit, said vector unit, said processor, said memory, and said counter together.

34. A device according to Claim 33, wherein said processor calculates the basic compression factor and estimates the gain factor under control of a program stored in said memory.

35. A digital still camera comprising:

an image acquisition unit for transmitting light corresponding to an image of scene;

a sensor unit connected to said image acquisition unit for providing a digital image of scene, the digital image comprising a matrix of elements, each element comprising at least one digital component for representing a pixel; and

a control device for compressing the digital image and comprising

a discrete cosine transform (DCT) unit for splitting the digital image into a plurality of blocks, and calculating for each block a group of DCT coefficients for the different types of components;

a quantization unit for

quantizing the DCT coefficients of each group using a corresponding quantization table scaled by a gain factor for achieving a target compression factor, and

further quantizing the DCT coefficients of each group using the corresponding quantization table scaled by a pre-set factor;

a zig-zag unit for arranging the further quantized DCT coefficients in a vector; and

a processor for calculating a basic compression factor provided by the quantization table scaled by the pre-set factor as a first function of the vector, and for estimating the gain factor as a second function of the basic compression factor, the second function being determined experimentally according to the target compression factor.

36. A digital still camera according to Claim 35, wherein each element comprises a plurality of digital components of different types; and wherein each element of the digital image comprises a luminance component, a first chrominance component, and a second chrominance component.

37. A digital still camera according to Claim 35, wherein the vector comprises a zig-zag vector with quantized coefficients representing low frequencies being arranged at a beginning of the vector, and quantized coefficients representing high frequencies being arranged at an end of the vector.

38. A digital still camera according to Claim 35, wherein said quantization unit quantizes the DCT coefficients for each group using the corresponding quantization table scaled by the gain factor in a first operative condition, and quantizes the DCT coefficients for each group using the corresponding quantization table scaled by the pre-set factor in a second operative condition.

39. A digital still camera according to Claim 35, wherein said processor determines a first number of bits required to encode the vector, and calculates the basic compression factor summing the first number of bits with a second number of bits required to encode control values, and divides the sum by a number of elements of the digital image.

40. A digital still camera according to Claim 39, further comprising: